MARK SCHEEFF

San Francisco, CA 94107 | 415-810-3434 | contact2@markscheeff---dot--com

EDUCATION

BS Mechanical Engineering, Stanford University, 1992

MS Mechanical Engineering, Stanford University, 1995

ELEVATOR PITCH

Engineer, inventor and entrepreneur equally versed at seeing the big picture and getting the details exactly right. Extremely broad technical range covering much of the engineering spectrum. Good experience with the strategic/business side of things including company planning, IP, R+D group management and acquisition.

TECHNICAL KEYWORDS

Mechatronics, Entrepreneurship, Medical Devices, Robotics, Composite Structures, Scientific Instrumentation, High Precision Mechanical Design, R+D Management, Electron Microscopy, Nanotechnology, Social Robotics, Solar/Electric Vehicles.

EXPERIENCE

R+D Director and Principal Engineer

August 2013-March 2016

CR Bard

Loma Vista was acquired by CR Bard at the beginning of August, 2013. My initial work was in handing off the product pipeline and key technologies to Bard. Subsequent work included developing ideas for new products in structural heart, next generation fiber balloons, and, finally, a major push in dialysis access. In addition, I assisted with the further sales rollout of Loma Vista's products in the US and did a little business development work.

VP of Product Development, Employee #1

July 2007 — August 2013

Loma Vista Medical

Using high strength "Kevlar" type fiber, Loma Vista Medical built the world's most advanced medical balloons. Our first product supported the percutaneous implantation of a prosthetic aortic valve.

I was a major part of taking this startup from "two people in a garage" to a successful acquisition. I ended up wearing quite a few "hats" over the years. Here's a subset of what I did:

Technical
Inventing and perfecting multiple ground breaking products, three company product pivots covering three entirely different anatomies, designing and deploying never-before-seen manufacturing equipment (Including custom robotics for cleaning, placing and adhering high strength fiber to our balloon), product specification development to meet user needs and regulatory requirements, rigorous product testing to meet specifications, hiring and management of the R+D group, personally created several hundred pages of patent filings, troubleshooting, more troubleshooting…

Strategic/Business
Helping to plan (with the CEO) the direction, goals and funding for the company, major part of hiring every single employee, clinical interface with doctors, need finding, marketing, going out and selling the product to doctors and at tradeshows, staff therapist ☺, countless biz dev meetings and presentations on the way to acquisition.

Co-Founder and Head of Engineering

October 2004— June 2007

Hummingbird Scientific

Co-founder of a company building tools for electron and ion microscopes. Worked with clients in nanotechnology, materials science and biology.

Technical
Designed, tested and delivered tools for manipulating samples in a Transmission Electron Microscope (TEM). Examples include nano-manipulation, chemical reaction and cryogenic sample preparation as well as micro-motorized systems for ultra-precise sample manipulation. Technologies included piezo actuation, high precision mechanical design, very low noise shielding/wiring, vacuum compatibility, interface software and chassis, embedded controllers, high voltage design, and cryogenic design in vacuum systems

Strategic/Business
Strategic planning, hiring, managing R+D, marketing presentations, developing new client relationships.

Funding
Lead author and PI on three winning phase I Small Business Innovation Research (SBIR) grants. Lead author and designated PI on the two subsequent phase II proposals. $1.8M raised with no loss of equity.

Engineer 4

October 2001 — October 2004

Lawrence Berkeley National Lab

I worked in an internal group ("DesignWorks") modeled on a product design consultancy. We specialized in small to medium sized projects, cross-disciplinary work, and a rapid, modern, response to project needs.

Technical
Project examples include a microscope that automatically loaded, optically reviewed and sorted 100s of slides, a "laser tweezers" that could do single molecule manipulation and a complex machine for viewing microarrays. Skills deployed included embedded control, PC software, high precision mechanical design and custom circuitry.

Management/Organization
Built and managed numerous small project teams, developed a project planning process for the group, marketed group inside and outside the lab, built estimates and scopes of work, handled "difficult" clients and management.

Engineering Consultant

December 2000 — June 2001

Templex Technology

Templex was a startup producing fiber Bragg gratings, a passive optical component. Lead Engineer for core of manufacturing setup. Detailed design and testing for components and methods of removing and replacing these components with high accuracy, repeatability (2um), and stability in a laser writing system.

Member of the Research Staff

March 1996—April 2000

Interval Research

Interval was an amazing research lab modeled on Xerox Parc. I worked on a variety of projects at Interval. The largest project explored human response to a socially competent robot. I designed, built, and refined this custom robot and then tested it with an array of human subjects in a variety of contexts.

Technical
Conceptual design for the whole robot, including method of operation, appearance, and integration of engineering requirements with research objectives. Designed all the mechanical systems and all electrical systems (power management, wireless communications, etc.), specified several generations of onboard computers and wrote a portion of the control software. I integrated and debugged these subsystems.

Management/Organization

I managed the 5+ person team through most of the project.

Human Testing
Designed and implemented a human testing regime for both lab and public settings, analyzed and reduced the subsequent data and presented results.

Other projects at Interval: Design, implementation and costing of several force feedback devices. Design of a system for simple TV based video editing. Design of a privacy interface for networked video cameras.

Mechanical Engineer

January 1993—March 1996

SLAC (Stanford Linear Accelerator Center)

The largest project I worked on was the design of laser beam steering units for a new electron/positron beam diagnostic system. I collected several months of data on stability and performance of various prototypes and then designed two different remote controlled ultra-high stability vacuum compatible steering devices for steering this megawatt-level laser beam.

Engineer and Co-Leader

January 1989—December 1993

Stanford Solar Car Project

This was a long time ago, but I include it because it was such a formative experience. This was (and still is, 27 yrs after its founding) an all-volunteer student group that builds and races cars powered by sunlight.

Technical
Wrote simulation and optimization software for vehicle design and racing. Controlled the operation of the car during two trans-continental races. Performed complete performance testing program for all of car's major subsystems. Many other subsystems designed.

Management/Organization
Co-Leader for the entire project for one year. Raised money and in kind support through university sources, Stanford election campaigning, proposal writing and corporate contacts. I participated in three trans-continental races and over 20 smaller rallies, fairs and parades held throughout the world.

PUBLCIATIONS

- *Experiences with Sparky, a Social Robot*, in proceedings of WIRE 2000
- *A Layered Architecture for Lifelike Robotic Motion*, in proceedings of ICAR 1999
- A book chapter in *Socially Intelligent Agents: Creating Relationships with Computers and Robots*.
- *Haptic techniques for media control*, Snibbe, S. Mclean, K., Shaw, R., Roderick, J., Verplank, W., Scheeff, M. In Proceedings of the 14th ACM Symposium on User Interface Software and Technology (UIST 2001).[Rochester]

PATENTS

- US8708955, Inflatable Medical Devices
- US9186488, Method of Making Inflatable Medical Devices
- US9504811, Inflatable Medical Devices
- EP2300094B1, Inflatable Medical Devices
- Over 20 national and international applications pending.

ACTIVITIES/HOBBIES

- Part-time studio artist, backpacker, film buff.